

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-38 (Canceled).

Claim 39 (New): A waterproof vapor-permeable multilayer article, comprising:
at least one first layer made of a material that is vapor-permeable and microporous,
said first layer material being further selected from a group comprising materials that are at
least partially hygroscopic and material that can assume hygroscopic characteristics over
time; and

at least one second layer that is waterproof and vapor-permeable.

Claim 40 (New): The multilayer article according to claim 39, wherein said at least
one first layer comprises a base of polyolefin and a filler made of filler particles.

Claim 41 (New): The multilayer article according to claim 40, wherein the molecular
weight of said polyolefin is at least 500,000 g/mole.

Claim 42 (New): The multilayer article according to claim 41, wherein the molecular
weight of said polyolefin is between 4×10^6 g/mole and 7×10^6 g/mole.

Claim 43 (New): The multilayer article according to claim 40, wherein said
polyolefin is constituted by a material selected from a group consisting of isotactic
polypropylene and polyethylene.

Claim 44 (New): The multilayer article according to claim 40, wherein said filler is silicon dioxide SiO₂.

Claim 45 (New): The multilayer article according to claim 44, wherein an average diameter of the filler particles of silicon dioxide SiO₂ is substantially between 0.01 μm and 20 μm , while an average surface area of said fillers is substantially between 30 m²/g and 950 m²/g.

Claim 46 (New): The multilayer article according to claim 44, wherein an average surface area of said filler particles is at least 100 m²/g.

Claim 47 (New): The multilayer article according to claim 39, wherein said at least one first layer made of microporous material has a pore size of less than 1 μm in diameter.

Claim 48 (New): The multilayer article according to claim 47, wherein more than 50% of the pores of said at least one first layer made of microporous material have a diameter of less than 0.5 μm .

Claim 49 (New): The multilayer article according to claim 48, wherein the porosity of said at least one first layer made of microporous material is at least 50%.

Claim 50 (New): The multilayer article according to claim 39, wherein said at least one first layer made of microporous material has a thickness comprised between 200 μm and 1.5 cm.

Claim 51 (New): The multilayer article according to claim 50, wherein said at least one first layer made of microporous material has a thickness between 200 μm and 600 μm .

Claim 52 (New): The multilayer article according to claim 39, wherein said at least one first layer is constituted by a microporous membrane that is available on the market.

Claim 53 (New): The multilayer article according to claim 39, wherein said at least one second waterproof vapor-permeable layer is constituted by a polypropylene-based microporous hydrophobic material.

Claim 54 (New): The multilayer article according to claim 53, wherein the polypropylene of said microporous hydrophobic material is an isotactic homopolymer.

Claim 55 (New): The multilayer article according to claim 53, wherein said at least one second layer is constituted by a hydrophobic membrane that is available on the market.

Claim 56 (New): The multilayer article according to claim 39, wherein said at least one second layer is composed of a polymer based on fluoropolymer or polysiloxane, said at least one second layer adhering to said first layer by spreading or immersing said first layer in a bath of said polymer.

Claim 57 (New): The multilayer article according to claim 56, wherein said fluoropolymer is a material that is available on the market.

Claim 58 (New): A method for manufacturing a multilayer article as set forth in claim 39, consisting of:

- preparing a solution or dispersion of a basic polymeric mix for a first layer in a volatile organic liquid with low surface tension, in order to produce a spreading solution that has a certain viscosity;
- applying said solution by spreading to a surface of a second layer, which acts as a backing, in order to form a coating layer on the surface thereof;
- evaporating volatile components of the spread in order to promote cross-linking reaction of the spread surface; and
- drying the coating in order to remove the residual humidity.

Claim 59 (New): A method for producing a multilayer article as set forth in claim 39, which consists of coupling a first layer and a second layer by lamination of one of said layers onto the other.

Claim 60 (New): A method for producing a multilayer article as set forth in claim 39, which consists of coupling a first layer in sheet form to a second layer, also in sheet form, by any of an adhesive spot application, by ultrasound and by high-frequency welding.

Claim 61 (New): The multilayer article as set forth in claim 39, comprising the step of providing at least one second layer of material that is constituted by a film obtained by way of a plasma deposition treatment.

Claim 62 (New): The multilayer article of claim 61, wherein the step for plasma deposition treatment is carried out by working in high-vacuum cold plasma conditions.

Claim 63 (New): The multilayer article of claim 62, wherein said step for plasma deposition treatment is carried out by using a radiofrequency generator so that an electrical field in the treatment oscillates with a frequency substantially between 13 MHz and 14 MHz.

Claim 64 (New): The multilayer article according to claim 63, wherein said step for plasma deposition treatment is carried out by using a radiofrequency generator so that an electrical field in the treatment oscillates with a frequency on the order of 13.56 MHz.

Claim 65 (New): The multilayer article of claim 64, wherein the step for plasma deposition treatment is carried out by using a power of the electrical field applied in the treatment that is substantially between 50 watts and 700 watts.

Claim 66 (New): The multilayer article of claim 65, wherein the duration of said plasma deposition treatment for a siloxane-based monomer is between 160 and 600 seconds.

Claim 67 (New): The multilayer article according to claim 66, wherein the duration of said plasma deposition treatment for a siloxane-based monomer is substantially equal to 420 seconds.

Claim 68 (New): The multilayer article according to claim 67, wherein the level of vacuum in said plasma deposition treatment is substantially between 10^{-1} mbar and 10^{-5} mbar.

Claim 69 (New): The multilayer article according to claim 61, wherein the step for plasma deposition treatment is carried out by working in high-vacuum cold plasma conditions and by using a radiofrequency generator so that an electrical field in the treatment oscillates

with a frequency on the order of 13.75 MHz, with an applied electrical field power of 300-500 watts, and a vacuum level comprised between 10^{-1} and 10^{-5} mbar.

Claim 70 (New): The multilayer article of claim 69, wherein the plasma deposition precursor material is a siloxane-based monomer.

Claim 71 (New): The multilayer article according to claim 69, wherein the plasma deposition precursor material is an oil-repellent and water-repellent fluoropolymer.

Claim 72 (New): The multilayer article of claim 69, wherein the material of said at least one second layer is a polysiloxane.

Claim 73 (New): The multilayer article according to one of claim 69, wherein the material of said at least one second layer is an oil-repellent and water-repellent fluoropolymer.

Claim 74 (New): The multilayer article of claim 73, wherein said fluoropolymer is a material available on the market.

Claim 75 (New): A method for producing a multilayer article according to claim 72, comprising the steps of:

- loading the first layer to be coated into a reaction chamber;
- bringing the reaction chamber to a preset vacuum pressure;
- starting plasma generating electrical discharge;
- injecting vaporized precursor monomer into said reaction chamber; and

- waiting for a preset deposition time.

Claim 76 (New): A production method according to claim 75, comprising a pretreatment step that consists of the surface cleaning of said first layer by subjecting it to an inert gas that is injected into said reaction chamber.